

**TOP SECRET RUFF**

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Attachment to

6 August 1970

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REFERENCE TO: Mission 1111, NEW PROBABLE OVER-THE-HORIZON DETECTION SYSTEM  
NIKOLAYEV, USSR

1. SIGNIFICANCE: THIS IS THE FIRST PHOTOGRAPHIC IDENTIFICATION  
OF A PROBABLE OVER-THE-HORIZON (OHD) SYSTEM  
IN THE USSR.
2. REMARKS: OHD SYSTEMS UTILIZE THE HIGH FREQUENCY RADIO  
SPECTRUM FOR THE DETECTION OF TARGETS OVER  
DISTANCES OF SEVERAL THOUSANDS OF MILES. THIS  
PROBABLE OHD SYSTEM, NEAR NIKOLAYEV, USSR,  
CONSISTS OF TWO LARGE ANTENNA ARRAYS POSITIONED  
APPROXIMATELY 14 NAUTICAL MILES APART IN A  
PROBABLE BISTATIC ARRANGEMENT.
3. LOCATION: ONE ANTENNA ARRAY IS LOCATED 12.5 NM SE OF THE  
CENTER OF NIKOLAYEV, AT THE NIKOLAYEV RADCOM A  
AM BC XMTR STA   
THE OTHER IS 9.3 NM NE OF NIKOLAYEV.

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4. COLLATERAL:

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GROUP 1 EXCLUDED FROM  
AUTOMATIC DOWNGRADING  
AND DECLASSIFICATION

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5. FIRST IDENTIFICATION:

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6. NEGATION DATE:

7. SUBSEQUENT COVERAGE:

THE LAST KH PHOTOGRAPHY PRIOR TO KH 1111-1 WAS

[redacted] AT THAT TIME

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ONLY TRENCHES FOR THE ANTENNA FOOTINGS AND

FOOTINGS FOR THE CONTROL BUILDINGS WERE PRESENT.

8. DIMENSIONS/  
SPECIFICATIONS:

PROBABLE RECEIVING ARRAY

LENGTH OF ARRAY 323M (1060 FT)

NUMBER OF TOWERS 32

HEIGHT OF TOWERS 98M ( 320 FT)

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PROBABLE TRANSMITTING ARRAY

LENGTH OF ARRAY 198M (650 FT)

NUMBER OF TOWERS 15

HEIGHT OF TOWERS 64M (210 FT)

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NOTE: ALL DIMENSIONS GIVEN ARE APPROXIMATE.

AZIMUTH  $\pm 3^{\circ}$ 

9. MISSION READOUT: A PROBABLE OVER-THE-HORIZON DETECTION SYSTEM IS UNDER CONSTRUCTION NEAR NIKOLAYEV, USSR. THE SYSTEM CONSISTS OF TWO LARGE ANTENNA ARRAYS, APPROXIMATELY 14 NM APART IN AN APPARENT BISTATIC ARRANGEMENT.

ONE ANTENNA ARRAY (47-03-10N 032-12-00E), ADJACENT TO THE NIKOLAYEV RDO COM RCVR STA [REDACTED] IS THE PROBABLE RECEIVING ARRAY IN THE SYSTEM, BASED ON ITS LARGER SIZE AND ITS PROXIMITY TO THIS RECEIVING FACILITY. THIS ARRAY IS APPROXIMATELY 323 METERS (1,060 FEET) LONG AND 98 METERS (320 FEET) HIGH AND CONTAINS 32 TOWERS WHICH ARE LINEARLY POSITIONED. A LARGE CIRCULAR AREA CONSISTING OF EXCAVATIONS IS IMMEDIATELY NORTH OF THE ANTENNA BUT ITS FUNCTION IS NOT KNOWN.

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THE SECOND ANTENNA ARRAY IS LOCATED AT THE NIKOLAYEV RADCOM A AM BC XMTR STA [REDACTED] 46-49-04N 032-12-50E) AND IS PROBABLY THE TRANSMITTER ARRAY. THIS ARRAY IS APPROXIMATELY 198 METERS (650 FEET) LONG AND 64 METERS (210 FEET) HIGH AND CONTAINS 15 TOWERS WHICH ARE LINEARLY POSITIONED.

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BOTH ANTENNA ARRAY ORIENTATIONS ARE IDENTICAL, BUT IT CANNOT BE

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[REDACTED] **TOP SECRET RUFF** [REDACTED]

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DETERMINED WHETHER THE ARRAYS WILL OPERATE [REDACTED]

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# NEW PROBABLE OVER-THE-HORIZON DETECTION SYSTEM NIKOLAYEV, USSR

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MISSION 1111-1, 23-29 JULY 1970

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